## AMENDMENTS TO THE CLAIMS

1-22. (Canceled)

23. (Currently Amended) A gas distribution plate assembly for a plasma ~~processing~~ deposition chamber, comprising:

a diffuser plate having an upstream side and a downstream side in the plasma deposition chamber; ~~and~~

a plurality of gas passages passing between the upstream and downstream sides, wherein at least one of the gas passages has a first cylindrical shape for a portion of its length extending from the upstream side, a second coaxial cylindrical shape with a smaller diameter connected to the first cylindrical shape and extending for a portion of its length, a coaxial conical shape connected to the second cylindrical shape for the length of the remaining ~~length~~ portion of the diffuser plate, with the upstream end of the conical shape ~~portion~~ having substantially the same diameter as the second cylindrical shape and the downstream end of the conical shape ~~portion~~ having a larger diameter; and

an RF power source coupled to the diffuser plate.

24. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the diameter of the portion having the first cylindrical shape is between about 0.06 inch to about 0.3 inch.

25. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the diameter of the portion having the second cylindrical shape is between about 0.030 inch to about 0.070 inch.

26. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the ratio of the length of the portion having the first cylindrical shape to the length of the portion having the second cylindrical shape is between about 0.3 to about 1.5.

27. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the diameter of the downstream end of the ~~conical~~ portion having the conical shape is between about 0.2 inch to about 0.4 inch.

28. (Currently Amended) The gas distribution plate assembly of claim 27, wherein the portion having the conical shape is flared at about 20 degrees to about 35 degrees.

29. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the ratio of the length of the portion having the second cylindrical shape to the length of the portion having the conical shape is between about 0.8 to about 2.0.

30. (Currently Amended) The gas distribution plate assembly of claim 23, wherein a spacing between the downstream end of ~~the conical portion of~~ adjacent gas passages is at most about 0.5 inch.

31. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the thickness of the diffuser plate is between about 1.0 inch to about 2.2 inch.

32. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the diffuser plate is polygonal.

33. (Currently Amended) The gas distribution plate assembly of claim 23, wherein the portions having the first and second cylindrical shapes formed through the diffuser plate have a flow restricting attribute different than the portion having the coaxial ~~flared~~ conical shape.

34. (Currently Amended) The ~~polygonal~~ gas distribution plate assembly of claim 32, wherein the diffuser plate is rectangular.

35. (Currently Amended) The ~~rectangular~~ distribution plate assembly of claim 34, wherein the gas diffuser plate ~~size is~~ has an area of at least 1080 inch$^2$.

36. (Currently Amended) A gas distribution plate assembly for a plasma ~~processing~~ deposition chamber, comprising:

a diffuser plate having an upstream side and a downstream side in the plasma ~~process~~ deposition chamber that is coupled to a remote plasma source and the remote plasma source is coupled to a fluorine source; ~~and~~

a plurality of gas passages passing between the upstream and downstream sides, wherein at least one of the gas passages has a first cylindrical shape for a first portion of its length extending from the upstream side, a second coaxial cylindrical shape with a smaller diameter connected to the first cylindrical shape and extending for a second portion of its length, a coaxial conical shape connected to the second cylindrical shape for the length of the remaining ~~length~~ portion of the diffuser plate, with the upstream end of the conical shape ~~portion~~ having substantially the same diameter as the second cylindrical shape and the downstream end of the conical shape ~~portion~~ having a larger diameter; and

an RF power source coupled to the diffuser plate.

37. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the diameter of the first portion having the first cylindrical shape is between about 0.06 inch to about 0.3 inch.

38. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the diameter of the second portion having the second cylindrical shape is between about 0.030 inch to about 0.070 inch.

39. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the ratio of the length of the first portion having the first ~~right~~ cylindrical shape to the length of the second portion having the second cylindrical shape is between about 0.3 to about 1.5.

40. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the diameter of the downstream end of the remaining portion having the conical ~~portion~~ shape is between about 0.2 inch to about 0.4 inch.

41. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the conical shape is flared at about 20 degrees to about 35 degrees.

42. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the ratio of the length of the second portion having the second cylindrical shape to the length of the remaining portion having the conical shape is between about 0.8 to about 2.0.

43. (Currently Amended) The gas distribution plate assembly of claim 36, wherein a spacing between the downstream end ~~of the conical portion~~ of adjacent gas passages is at most about 0.5 inch.

44. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the thickness of the diffuser plate is between about 1.0 inch to about 2.2 inch.

45. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the diffuser plate is polygonal.

46. (Currently Amended) The gas distribution plate assembly of claim 36, wherein the second portion having the second cylindrical shape ~~formed through the diffuser plate have~~ has a flow restricting attribute different than the ~~coaxial flared~~ remaining portion having the conical shape.

47. (Currently Amended) The ~~polygonal~~ gas distribution plate assembly of claim 45, wherein the diffuser plate is rectangular.

48. (Currently Amended) The ~~rectangular~~ gas distribution plate assembly of claim 47, wherein the gas diffuser plate ~~size is~~ has an area of at least 1080 inch$^2$.

49-80. (Canceled)